

WHAT IS CLAIMED IS:

1. A developing apparatus comprising:
a developer bearing member; and
a developer carrying screw placed adjacently to
5 said developer bearing member in parallel with said
developer bearing member,
wherein an inclination angle of "a carrying
surface facing in a developer carrying direction of a
spiral blade of said developer carrying screw" to a
10 shaft of said developer carrying screw is equal to or
less than 60 degrees.
2. The developing apparatus according to claim
1,
15 wherein the inclination angle of the carrying
surface is equal to or more than 50 degrees and equal
to or less than 60 degrees.
3. The developing apparatus according to claim
20 1,
wherein the inclination angle of the carrying
surface is smaller than an inclination angle of a
surface at an opposite side from the carrying surface
of said blade.
- 25 4. A developing apparatus comprising:
a developer bearing member; and

a developer carrying screw placed in parallel
with said developer bearing member,

wherein an inclination angle of "a carrying
surface facing in a developer carrying direction of a
5 spiral blade of said developer carrying screw" to a
shaft of said developer carrying screw is smaller
than an inclination angle of a surface at an opposite
side from the carrying surface of said blade.

10 5. The developing apparatus according to claim
4,

wherein said developer carrying screw is placed
adjacently to said developer bearing member.

15 6. A developing apparatus comprising:
a developer bearing member; and
a developer carrying screw placed in parallel
with said developer bearing member,
wherein a spiral blade of said developer
20 carrying screw faces in a developer carrying
direction, and has a plurality of carrying surfaces
having different inclination angles with respect to a
shaft of said developer carrying screw.

25 7. The developing apparatus according to claim
6,

wherein the carrying surface near to the shaft

of said screw has the smaller angle than the carrying surface farther from the shaft of said screw.

8. The developing apparatus according to claim
5 6,

wherein when a distance from a reference surface of the shaft of said developer carrying screw to a tip end of the blade is H_1 , and a distance from the reference surface to a point P at which the
10 plurality of carrying surfaces are intersecting each other is H_2 , $H_2 < H_1 \times 1/2$ is satisfied.

9. The developing apparatus according to claim
8,

15 wherein said developer carrying screw further satisfies $H_1 \times 1/3 < H_2 < H_1 \times 1/2$.

10. The developing apparatus according to claim
9,

20 wherein an inclination angle of the carrying surface near to the shaft of said screw is equal to or more than 3 degrees and equal to or less than 50 degrees.

25 11. The developing apparatus according to claim
6,

wherein said developer carrying screw is placed

adjacently to said developer bearing member.

12. A developing apparatus comprising:

a developer bearing member; and

5 a developer carrying screw placed in parallel
with said developer bearing member,

wherein a base portion of a carrying surface
facing in a developer carrying direction of a spiral
blade of said developer carrying screw has a curved
10 surface portion, and a base portion of a surface at
an opposite side from the carrying surface is a non-
curved surface.

13. The developing apparatus according to claim
15 12,

wherein the curved surface portion ranges
substantially a same area as a pitch of said screw in
the developer carrying direction.

20 14. The developing apparatus according to claim
12,

wherein said developer carrying screw is placed
adjacently to said developer bearing member.

25 15. A developing apparatus comprising:

a developer bearing member; and

a developer carrying screw placed in parallel

with said developer bearing member,

wherein said developer carrying screw has a plurality of spiral blades having different inclination angles of carrying surfaces facing in the
5 developer carrying direction.

16. The developing apparatus according to claim
15,

wherein said developer carrying screw has a
10 first blade with the inclination angle of the carrying surface facing in the developer carrying direction having a first value, and a second blade with a second value smaller than the first value, and said second blade is adjacent to said first blade, at
15 an upstream side in the developer carrying direction.

17. The developing apparatus according to claim
16,

wherein when a distance from a reference
20 surface of the shaft of said developer carrying screw to a tip end of said first blade is H_1 , and a distance from the reference surface to a tip end of said second blade is H_2 , $H_2 < H_1 \times 0.7$ is satisfied.

25 18. The developing apparatus according to claim
17,

wherein the inclination angle of said first

blade is larger than 60 degrees, and the inclination angle of said second blade is larger than 5 degrees and smaller than 40 degrees.

5 19. The developing apparatus according to claim 16,

 wherein a surface of a space between said second blade and "said first blade at the upstream side of said second blade in the developer carrying direction" is inclined to the developer carrying
10 direction.

 20. The developing apparatus according to claim 19,

15 wherein when a distance from a reference surface of the shaft of said developer carrying screw to a tip end of said first blade is $H1$, and a distance from the reference surface to a point P at which the carrying surface of said first blade and
20 the surface in the space are intersecting each other is $H3$, $H3 < H1 \times 1/2$ is satisfied.

 21. The developing apparatus according to claim 20,

25 wherein an inclination angle of the surface in the space is larger than 5 degrees and smaller than 40 degrees.

22. The developing apparatus according to claim
15,

wherein said developer carrying screw is placed
adjacent to said developer bearing member.